DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office Action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1-15 and 17-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okanoue (US Patent # 5,179,861**) in view of **Haas (US Patent # US 6,304,556 B1)** in view of **Markki et al. (US Patent Publication # US 2004/0243682 A1)** in further view of **Iyer et al. (US Patent #US 7,058,706 B1).**

a) Consider **claim 1,** Okanoue clearly shows and discloses, a new node search method for searching for a service node for providing a service to a node (column 1 lines 54-63), in a communication system including a plurality of service nodes (figure 1, abstract, column 2 lines 18-24, column 3 lines 40-46) and the node, each of the service nodes and the mobile node having a node storage unit configured to store addresses of service nodes (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-60), the node search method comprising: transmitting a node search packet to search for the new service node from a search node (abstract, column 1 lines 64-67, column 2 lines 24-26), which searches for the new service node, to a search packet reception node having an address stored in the node storage unit of the search node (figure 4a, abstract, column 1 lines 28-31, column 4 lines 4-8 lines 48-56, column 5 lines 56-67); transmitting a node notice request packet from the search packet reception node to a peripheral node having an address stored in the node storage unit of the search packet reception node (figure 8, abstract, column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 lines 4 -13); returning a node notice packet from the search packet reception node to the search node, in response to the node search packet (abstract, column 1 line 67, column 2 lines 1-8 lines 29-35); transmitting the node notice packet from the peripheral node to the search node, in response to the node notice request packet (figure 8, abstract, column 1 lines 58-67, column 2 lines 1-9 lines 18-35); detecting the new service node on based on the returned node notice packet from the peripheral node, by the search node

(abstract, column 2 lines 5-17, lines 18-35); and updating the node storage unit of the search node based on the new service node detected by the search node (figure 7, column 6 lines 13-17 lines 21-32). However, Okanoue does not specifically disclose a mobile communication system or mobile nodes, the address of the peripheral node not being stored in the node storage unit of the search node or transmitting data for investigating node information from the search node to the detected new service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Haas shows and discloses two network protocols, which are particularly suitable for self-reconfigurable communications networks, such as ad-hoc networks (mobile communication system)(abstract, column 1 lines 23-25 lines 66-67, column 8 lines 22-24). More particularly, the first protocol is instrumental in efficiently finding routes within a network, while the second protocol can be used to locate users (mobile nodes)(column 1 lines 23-25 lines 66-67, column 8 lines 22-24) in a network with rapidly changing topology.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Haas into the system of Okanoue for the purpose of mobility management (abstract, column 3 lines 47-51), efficiently finding routes within a network, and locating users in a network with rapidly changing topology (abstract, column1 lines 7-13). However, Okanoue as modified by Haas does not specifically disclose the address of the peripheral node not being stored in the node storage unit of the search node or transmitting data for investigating node information from the search node to the detected new service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Markki et al. show and disclose a node informing its user of one or more events while the user interface of the node is in an idle state. The user might, for instance, be able to select one or more of the events of which she is informed for corresponding operations. The events of which the user is informed might include, for example, events corresponding to software operations and/or events corresponding to a network environment (e.g., a peer-to-peer environment), wherein the address of the peripheral node not being stored in the node storage unit of the search node (paragraph [0092], [0096], [0098], [0099] ,[0107], [0109], [0115]-[0118]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Markki et al. and Okanoue as modified by Haas since both concern sending out a query for information (e.g. network address) a receiving a response and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate searching for a particular node for which the network address is unknown, as taught by, Markki et al. into the system of Okanoue as modified by Haas for the purpose of discovering the unique identifier (i.e. network address) for a particular node (Markki; paragraph [0092]), thereby allowing direct access to the node.

However, Okanoue as modified by Haas as modified by Markki et al. does not specifically disclose transmitting data for investigating node information from the search node to the detected new service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Iyer et al. show and disclose determining a dynamic hop count and latency between two nodes across a network in a computer environment and transmitting to the detected service node, by

the search node, data for investigating node information concerning the detected service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected service node (abstract, column 1 lines 65-67, column 2 lines 1-5 lines 9-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate the teachings of Iyer et al. into the system of Okanoue as modified by Haas as modified by Markki et al. for the purpose of determining the number of hops and latency between two nodes.

b) Consider **claim 2,** Okanoue clearly shows and discloses, a node comprising: a node storage unit configured to store addresses of service nodes for providing a service to a node (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-60); a search packet creation unit configured to create a node search packet to search for a new service node (figure 4a, abstract, column 1 lines 64-67, column 2 lines 24-26, column 4 lines 48-56, column 5 lines 56-67); a communication unit configured to transmit the node search packet to a search packet reception node having an address stored in the node storage unit (figure 4a, abstract, column 1 lines 28-31, column 4 lines 4-8 lines 48-56, column 5 lines 56-67), to receive a node notice packet from the search packet reception node (figure 8, abstract column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 -13) and to receive the node notice packet from a peripheral node which receives a node notice request packet from the search packet reception node (figure 8, abstract, column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 lines 4 -13); a detection unit configured to detect the new service node based on the node notice packet returned from the peripheral node (abstract, column 2 lines 5-17, lines 31-35); and an update unit configured to update the node storage unit based on the new service node detected by the detection unit (figure 7, column 6 lines 13-17 lines

21-32). However, Okanoue does not specifically disclose a mobile node, the address of the peripheral node not being stored in the node storage unit of the search node or that the communication unit is configured to transmit, to the detected new service node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Haas shows and discloses two network protocols, which are particularly suitable for self-reconfigurable communications networks, such as ad-hoc networks. More particularly, the first protocol is instrumental in efficiently finding routes within a network, while the second protocol can be used to locate users (mobile nodes)(column 1 lines 23-25 lines 66-67, column 8 lines 22-24) in a network with rapidly changing topology.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Haas into the system of Okanoue for the purpose of mobility management (abstract, column 3 lines 47-51), efficiently finding routes within a network, and locating users in a network with rapidly changing topology (abstract, column1 lines 7-13). However, Okanoue as modified by Haas does not specifically disclose the address of the peripheral node not being stored in the node storage unit of the search node or the communication unit is configured to transmit, to the detected new service node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Markki et al. show and disclose a node informing its user of one or more events while the user interface of the node is in an idle state. The user might, for instance, be able to select one or more of the events of which she is informed for corresponding operations. The events of which the user is informed might include, for example, events corresponding to software operations and/or

events corresponding to a network environment (e.g., a peer-to-peer environment), wherein the address of the peripheral node not being stored in the node storage unit of the search node (paragraph [0092], [0096], [0098], [0099] ,[0107], [0109], [0115]-[0118]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Markki et al. and Okanoue as modified by Haas since both concern sending out a query for information (e.g. network address) a receiving a response and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate searching for a particular node for which the network address is unknown, as taught by, Markki et al. into the system of Okanoue as modified by Haas for the purpose of discovering the unique identifier (i.e. network address) for a particular node (Markki; paragraph [0092]), thereby allowing direct access to the node.

However, Okanoue as modified by Haas as modified by Markki et al. does not specifically disclose the communication unit is configured to transmit, to the detected new service node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected new service node.

Iyer et al. show and disclose determining a dynamic hop count and latency between two nodes across a network in a computer environment wherein the communication unit is configured to transmit, to the detected service node, data for investigating node information concerning the detected service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected service node (abstract, column 1 lines 65-67, column 2 lines 1-5 lines 9-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate the teachings of Iyer et al. into the system of Okanoue as modified by Haas as modified by Markki et al. for the purpose of determining the number of hops and latency between two nodes.

c) Consider **claim 3,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, further comprising: a data creation unit configured to create the data for investigating node information detected by the detection unit, the data being transmitted to the detected new service node (column 6 lines 13-20), wherein the node storage unit is configured to store the node information (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-67, column 6 lines 13-17 lines 21-32), the communication unit is configured to transmit the data created by the data creation unit, and to receive response data returned in response to the data by the detected new service node (column 1 lines 23-25 lines 66-67, column 8 lines 22-24), and the update unit is configured to update the node storage unit based on the returned response data (figure 7, column 6 lines 13-17 lines 21-32).

d) Consider **claim 4,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, wherein node information concerning the new service node is included in the node notice packet, the node storage unit is configured to store the node information, and the update unit is configured to update the node storage unit based on the returned node notice packet (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-67, column 6 lines 13-17 lines 21-32).

e) Consider **claim 5,** and **as applied to claim 3 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 3 or 4, wherein the node storage unit is configured to store the addresses of the service nodes and the node information according to a predetermined criterion (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-60, column 6 lines 13-17 lines 21-32).

f) Consider **claim 6,** and **as applied to claim 4 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 4, further comprising: a determination unit configured to determine inter-node information between the search node and the peripheral node according to inter-node information between the search node and the search packet reception node and inter-node information between the search packet reception node and the peripheral node based on the node notice packet (column 2 lines 5-16 lines 31-35), wherein the update unit is configured to update the node storage unit based on the inter-node information between the search node and the peripheral node determined by the determination unit (figure 7, column 6 lines 13-17 lines 21-32).

g) Consider **claim 7,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, further comprising: a notice packet creation unit configured to create the node notice packet by accessing the node storage unit (figure 8, column 6 lines 36-58), wherein the communication unit is configured to transmit the node notice packet created by the notice packet creation unit (column 1 lines 23-25 lines 66-67, column 8 lines 22-24).

h) Consider **claim 8,** and **as applied to claim 7 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of

claim 7, wherein the notice packet creation unit is configured to create the node notice packet that is passed through the peripheral node (abstract, column 1 line 67, column 2 lines 1-5 lines 32-35).

i) Consider **claim 9,** and **as applied to claim 7 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 7, wherein the notice packet creation unit is configured to create the node notice packet when the communication unit has received at least one of the node search packet, the node notice packet, and a node notice request packet for requesting return of the node notice packet (figure 8, column 6 lines 36-58).

j) Consider **claim 10,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, further comprising: a request packet creation unit configured to create the node notice request packet for requesting the peripheral node to return the node notice packet (figure 4a, column 5 lines 18-24, column 6 lines 1-20), wherein the communication unit is configured to transmit the node notice request packet created by the request packet creation unit (column 1 lines 23-25 lines 66-67, column 8 lines 22-24).

k) Consider **claim 11,** and **as applied to claim 10 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 10, wherein the request packet creation unit is configured to create the node notice request packet when the communication unit has received at least one of the node search packet, the node notice packet, or the node notice request packet (figure 8, column 6 lines 35-58).

l) Consider **claim 12,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, further comprising: a request packet creation unit configured to create a node registration

request packet for requesting registration in the node storage unit of another service node (figure 7, column 6 lines 7-17), wherein the communication unit is configured to transmit the node registration request packet created by the request packet creation unit (column 1 lines 23-25 lines 66-67, column 8 lines 22-24).

m) Consider **claim 13,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, wherein the communication unit is configured to receive a node registration request packet for requesting registration in the node storage unit of another service node (column 1 lines 23-25 lines 66-67, column 8 lines 22-24), and the update unit is configured to update the node storage unit based on the node registration request packet (figure 7, column 6 lines 13-17, lines 21-23).

n) Consider **claim 14,** and **as applied to claim 2 above,** Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, However, Okanoue does not specifically disclose a selection criterion holding unit configured to hold a selection criterion for selecting a service node to be used; and a selection unit configured to access the node storage unit and select the service node to be used, based on the selection criterion held in the selection criterion holding unit.

Haas shows and discloses a selection criterion holding unit (memory) configured to hold a selection criterion for selecting a service node to be used (node location and route information); and a selection unit (processor) configured to access the node storage unit and select the service node to be used, based on the selection criterion held in the selection criterion holding unit (column 6 lines 58-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Haas into the system of Okanoue for the

purpose of efficiently finding routes within a network, and locating users in a network with rapidly changing topology (abstract, column1 lines 7-13).

o) Consider **claim 15,** Okanoue clearly shows and discloses, a communication system comprising: a search node configured to search for a new service node for providing a service to a node by transmitting a node search packet in order to search for the new service node (abstract, column 1 lines 64-67, column 2 lines 24-26); a search packet reception node configured to receive the node search packet transmitted from the search node (figure 2, column 4 line 66 column 5 lines 1-2); and a peripheral node other than the search packet reception node (abstract, column 1 line 67, column 2 lines 1-5 lines 32-35), wherein the search node includes: a node storage unit configured to store addresses of service nodes (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-60); a search packet creation unit configured to create the node search packet to search for the new service node (figure 4a, abstract, column 1 lines 64-67, column 2 lines 24-26, column 4 lines 48-56, column 5 lines 56-67); a communication unit configured to transmit the node search packet to the search packet reception node (figure 2, column 4 line 66 column 5 lines 1-2) having an address stored in the node storage unit (figure 4a, abstract, column 1 lines 28-31, column 4 lines 4-8 lines 48-56, column 5 lines 56-67), to receive a node notice packet from the search packet reception node (figure 8, abstract column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 lines 4 -13), and to receive the node notice packet from a peripheral node which receives a node notice request packet from the search packet reception node (figure 8, abstract, column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 lines 4-13); a detection unit configured to detect the new service node based on the node notice packet returned from the peripheral node (abstract, column 2 lines 5-17, lines 31-35); and an update unit configured to update the node storage unit based on the new service node detected by the detection unit (figure 7, column

6 lines 13-17 lines 21-32). However, Okanoue does not specifically disclose a mobile communication system or mobile nodes, the address of the peripheral node not being stored in the node storage unit of the search node or that the communication unit is configured to transmit, to the new detected service node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the new search node and the detected service node.

Haas shows and discloses two network protocols, which are particularly suitable for self-reconfigurable communications networks, such as ad-hoc networks (mobile communication system)(abstract, column 1 lines 23-25 lines 66-67, column 8 lines 22-24). More particularly, the first protocol is instrumental in efficiently finding routes within a network, while the second protocol can be used to locate users (mobile nodes)(column 1 lines 23-25 lines 66-67, column 8 lines 22-24) in a network with rapidly changing topology.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Haas into the system of Okanoue for the purpose of mobility management (abstract, column 3 lines 47-51), efficiently finding routes within a network, and locating users in a network with rapidly changing topology (abstract, column1 lines 7-13). However, Okanoue as modified by Haas does not specifically disclose that the address of the peripheral node not being stored in the node storage unit of the search node or the communication unit is configured to transmit, to the detected service node, data for investigating node information concerning the detected service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected service node.

Markki et al. show and disclose a node informing its user of one or more events while the user interface of the node is in an idle state. The user might, for instance, be able to select one or more of the events of which she is informed for corresponding operations. The events of which the user is informed might include, for example, events corresponding to software operations and/or events corresponding to a network environment (e.g., a peer-to-peer environment), wherein the address of the peripheral node not being stored in the node storage unit of the search node (paragraph [0092], [0096], [0098], [0099] ,[0107], [0109], [0115]-[0118]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Markki et al. and Okanoue as modified by Haas since both concern sending out a query for information (e.g. network address) a receiving a response and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate searching for a particular node for which the network address is unknown, as taught by, Markki et al. into the system of Okanoue as modified by Haas for the purpose of discovering the unique identifier (i.e. network address) for a particular node (Markki; paragraph [0092]), thereby allowing direct access to the node.

However, Okanoue as modified by Haas as modified by Markki et al. does not specifically disclose the communication unit is configured to transmit, to the detected service node, data for investigating node information concerning the detected service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the
detected service node.

Iyer et al. show and disclose determining a dynamic hop count and latency between two nodes across a network in a computer environment wherein the communication unit is configured to transmit, to the detected service node, data for investigating node information concerning the detected service node, the data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the detected service node (abstract, column 1 lines 65-67, column 2 lines 1-5 lines 9-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate the teachings of Iyer et al. into the system of Okanoue as modified by Haas as modified by Markki et al. for the purpose of determining the number of hops and latency between two nodes.

p) Consider **claim 17,** and as applied to **claim 1** above, Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node search method of claim 1, wherein the updating step comprises updating the node storage unit to include an address of the new service node (figure 7, column 6 lines 13-17 lines 21-32).

q) Consider **claim 18,** and as applied to **claim 2** above, Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the node of claim 2, wherein the update unit is configured to update the node storage unit to include an address of the new service node (figure 7, column 6 lines 13-17 lines 21-32).

r) Consider **claim 19,** and as applied to **claim 15** above, Okanoue as modified by Haas as modified by Markki et al. and as further modified by Iyer et al. clearly show and disclose, the mobile communication system of claim 15, wherein the update unit is configured to update the node storage unit to include an address of the new service node (figure 7, column 6 lines 13-17 lines 21-32).

5. **Claims 16 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Okanoue (US Patent # 5,179,861)** in view of **Markki et al. (US Patent Publication # US 2004/0243682 A1)** in further view of **Iyer et al. (US Patent #US 7,058,706 B1).**

a) Consider **claim 16,** Okanoue clearly shows and discloses, a computer-readable storage medium, including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to function as a node and to perform a method, comprising: storing addresses of service nodes for providing a service to a mobile node (figure 2, figure 7, column 1 lines 23-24 lines 27-31, column 4 lines 48-50, column 5 lines 56-60); creating a node search packet to search for a new service node (figure 4a, abstract, column 1 lines 64-67, column 2 lines 24-26, column 4 lines 48-56, column 5 lines 56-67); transmitting the node search packet to a search packet reception node having and address stored in the storing (figure 4a, abstract, column 1 lines 28-31, column 4 lines 4-8 lines 48-56, column 5 lines 56-67); receiving the node notice packet from the search packet reception node; receiving the node notice packet from a peripheral node which receives a node notice request packet from the search packet reception node (figure 8, abstract, column 1 lines 58-67, column 2 lines 1-9, lines 18-35, column 4 lines 4 -13); detecting the new service node based on the node notice packet returned from the peripheral node (abstract, column 2 lines 5-17, lines 31-35); updating the addresses based on the detected new service node (figure 7, column 6 lines 13-17 lines 21-32). However, Okanoue does not specifically disclose the address of the peripheral node not being stored in the node storage unit of the search node or transmitting to the detected new service node, by the search node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the new detected service node.

Markki et al. show and disclose a node informing its user of one or more events while the user interface of the node is in an idle state. The user might, for instance, be able to select one or more of the events of which she is informed for corresponding operations. The events of which the user is informed might include, for example, events corresponding to software operations and/or events corresponding to a network environment (e.g., a peer-to-peer environment), wherein the address of the peripheral node not being stored in the node storage unit of the search node (paragraph [0092], [0096], [0098], [0099] ,[0107], [0109], [0115]-[0118]).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings of Markki et al. and Okanoue since both concern sending out a query for information (e.g. network address) a receiving a response and as such, both are with in the same environment.

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate searching for a particular node for which the network address is unknown, as taught by, Markki et al. into the system of Okanoue for the purpose of discovering the unique identifier (i.e. network address) for a particular node (Markki; paragraph [0092]), thereby allowing direct access to the node. However, Okanoue as modified by Markki et al. does not specifically disclose transmitting to the detected new service node, by the search node, data for investigating node information including a request for a delay value and a number of hops in a packet transmission between the search node and the new detected service node.

Iyer et al. show and disclose determining a dynamic hop count and latency between two nodes across a network in a computer environment and transmitting to the detected new service node, by the search node, data for investigating node information including a request for a delay

value and a number of hops in a packet transmission between the search node and the new detected service node (abstract, column 1 lines 65-67, column 2 lines 1-5 lines 9-27).

Therefore, it would have been obvious to one of ordinary skill in the art that the time the invention was made to incorporate the teachings of Iyer et al. into the system of Okanoue as modified by Markki et al. for the purpose of determining the number of hops and latency between two nodes.

b) Consider **claim 20,** and as applied to **claim 16** above, Okanoue as modified by Markki et al. as modified by Iyer et al. clearly show and disclose, the method of claim 16, wherein the updating step comprises updating the addresses to include an address of the new service node (Okanoue; figure 7, column 6 lines 13-17 lines 21-32).

Response to Arguments

6. Applicant's arguments with respect to "the address of the peripheral node not being stored in the node storage unit of the search node" have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed 06AUG2009 have been fully considered but they are not persuasive.

Applicant argues that " '861 [Okanoue] patent fails to disclose transmitting the node notice packet from the peripheral node to the search node, in response to the node notice request packet"

The Examiner respectfully disagrees; the elements disclosed in Okanoue ('861) were clearly mapped to the claimed elements in the previous Office Action(s). Furthermore, if the function of the elements as disclosed by the reference perform the function of the claimed elements based on

the function of the elements as disclosed in the reference they are considered functionally the same regardless of the differences in what they have been named. The arguments below were originally presented in the Office Action dated 26NOV2008 and are repeated here for the convenience of Applicant. Okanoue clearly discloses transmitting the node notice packet from the peripheral node to the search node, in response to the node notice request packet (figure 8, abstract, column 1 lines 58- 67, column 2 lines 1-9, lines 18-35, column 4 lines 4-13). It is clearly shown that once the destination node (peripheral node) itself receives the address request (node notice request) (figure 8 steps 801, 802) that the destination node (peripheral node) sends a response (node notice packet)(figure 8 step 806) back to the source (search node). It is clear that once the destination node receives an address request it sends a response back to the source node. During the interview on 22JUL2009 Applicant indicated that what is at issue with this particular feature is that in Applicant's invention the node notice request packet is sent directly to the search node from the peripheral node. In response to Applicant's argument that the references fail to show certain features of Applicant's invention, it is noted that the features upon which Applicant relies (i.e., transmitting the node notice request packet directly to the search node) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Okanoue clearly clearly discloses transmitting the node notice packet from the peripheral node (destination node) to the search node (source node), in response to the node notice request packet. While Applicant's specification may indicate that the node notice packet is sent directly to the search node from the peripheral node this is not clearly reflected in the claims. The claims simply specify that the node notice packet is transmitted to the search node from the peripheral node and clearly can be reasonably interpreted as being transmitted to the search node along any number of paths.

Including, as disclosed in Okanoue, back along the path that the original node notice request was sent.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 2005/0047350 A1
- US 2004/0264389 A1
- US 2005/0174950 A1
- US 2009/0172180 A1
- US 2003/0128693 A1
- US 7,408,882 B2
- US 7,274,683 B2
- US 2004/0243580 A1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL C. MURRAY whose telephone number is 571-270-1773. The examiner can normally be reached on Monday - Friday 0800-1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on (571)-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DCM/
Examiner, Art Unit 2443

/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443